SIEMENS

MAMMOMAT 1000/3000/3000 Nova

[redacted] SP

Service

Installation Instructions

Mounting instructions for radiation shield optionally with Separate control console

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Radiation shield and console carrier

General remark

The mounting kit "Radiation shield and console carrier" is known and used as an option for the MAMMOMAT 1000/3000/3000 Nova since long time. The same hardware (with very few slight modifications) was put in use equally for the MAMMOMAT Novation *DR*. However, it is used more frequently in the latter case because the "Powerbox" generator is mounted at the back of the stand. Wherever necessary this document attempts to provide specific information, instructions and hints facilitating the installation in connection with both these systems.

Contents of the mounting kit material number: 64 38 894

Contents of the mounting kit

NOTE **Two screws for fastening the column cover plate as transport guard shall not be used for further mounting.**

Amount	Name	Notes
1	Column	
1	Column cover plate	
2+2	Screw M4 × 16 + lock washer M4	for column cover plate
1	“No cable” cover plate	at bottom of column cover plate
2+2	Screw M4 × 16 + lock washer M4	for “No cable” cover plate
4	“Height mounting” cover plate	
8+8	Lock washer M4 + nut M4	for height mounting covers
1	Foot	
2	Hollow levelling screw	placed at the foot
2	Covers for hollow levelling screws	placed at the foot
2+2	Screw M8 × 75 + lock washer M8	for foot mounting to column
3	Cylindrical tensioning block	1 long and 2 short
2	Screw M6 × 40	for bar mounting
1	Lower cross bar	
1	Bar support foot	
4	Rubber-pads	for lower cross bar
1	Upper cross bar	in two parts
1	Adhesive “hole cover”	for upper cross bar
6	Adhesive chink-pad	for upper cross bar
1	Stiffening cord	
8	Piece of tube	for stiffening cord
1	Shield glass	
1	Glass protection rubber	

Optional equipment (delivered in the control console package)

Amount	Name	Notes
1	Separate control console	
4+4	screw M6 ×30 + lock washer M6	for upper bar mounting
1	Bracket	
1	End plug	for bracket end
2	Cylindrical mounting block	for bracket mounting
2+2	Nut M6 + lock washer M6	for bracket mounting
2+2	Screw M6 × 30 + lock washer M6	for bracket mounting

Tools required

- Standard installation tools.
- Drill machine and drill bits for concrete.

Time required

Approximately three (3) hours for one Customer Support Engineer CSE. For som activities two persons may be necessary.

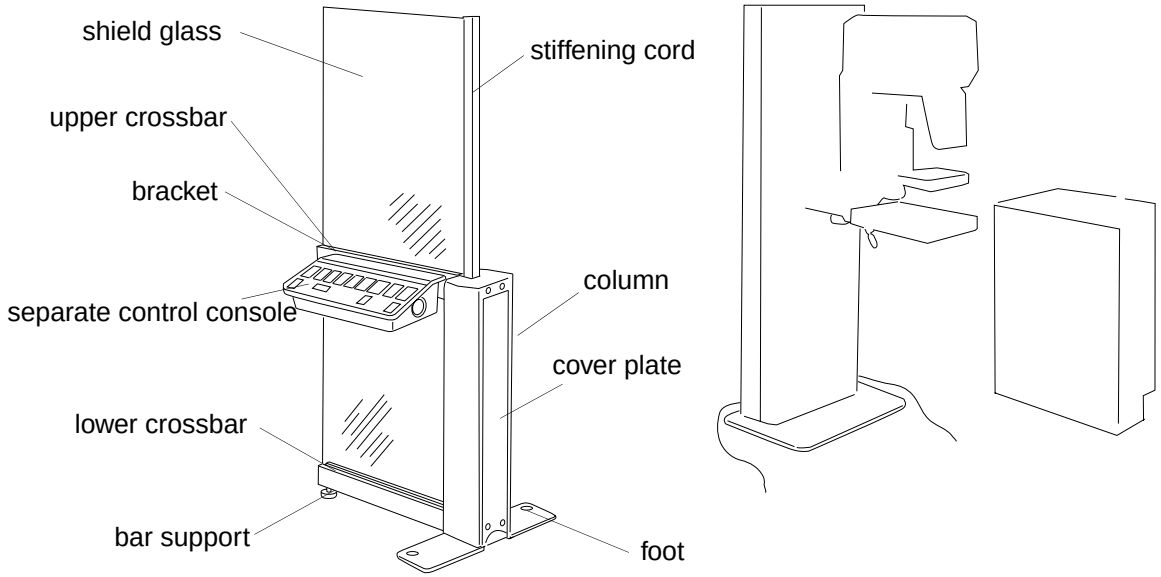
For the installation of the cable

between the control console (panel) and the generator, see, e.g.:

in case of control console carrier for a **MAMMOMAT 1000/3000/3000 Nova** - the Installation and Start-up Instructions for MAMMOMAT 1000/3000 Nova; the document print number: SPB7-230.033.11….

in case of control console carrier for a **MAMMOMAT Novation** *DR* - the Installation and Start-up Instructions for MAMMOMAT Novation *DR*; the document print number: SPB7-250.812.03….

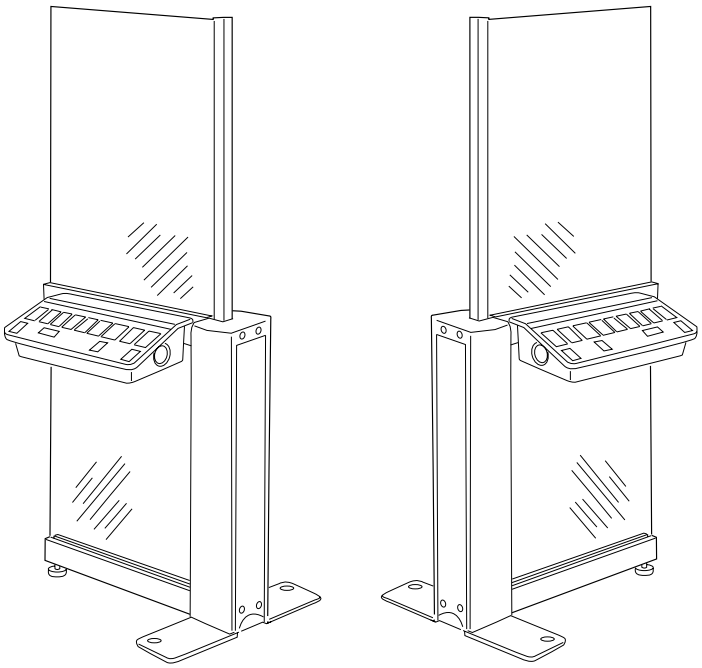
Overview



Initial decisions

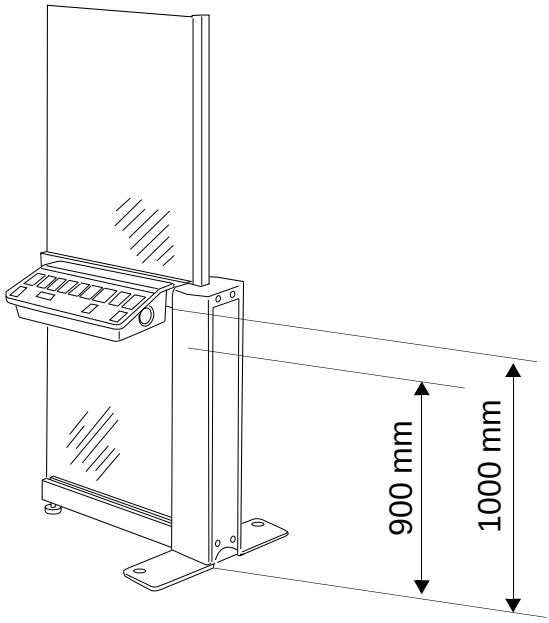
Console mounting-side

You can choose on what side of the glass you want to place the console. It is depending of how you mount the upper cross bar. The pictures in this document shows it mounted at the left side of the column.



Console mounting height - important general remarks

Basically two attachment heights are possible: 1000 mm and 900 mm above the floor. There are cover plates supplied, by means of which the mounting holes in the unused height may be covered. Such a covering happens with the help of attachment nuts at the inside of the column.



When using the radiation shield and console carrier for the analogue **MAMMOMAT system 1000/3000/3000 Nova**, any of the two indicated height levels can be chosen. The cable leading to the control console will be laid within the crossbar / bracket (see further).

crossbar / bracket

Connector on the back of 6th control console

However, in case of the digital **MAMMOMAT Novation** *DR* system the console can only be attached to the upper height level, I.e. 1000 mm. One of the holes of the lower height level will have to be used as an exit hole for the console cable 066 36 802. This cable cannot be led through the crossbar, cannot be connected to the control console on the backside. Therefore, if the control console arrives with the connector mounted on its backside, the position of the connector will have to be changed to the bottom of the console.

Remounted connector

Further to this, such cables can have straight connectors on both ends, however, they are usually equipped with one straight and 90°bent connector.

NOTE	**If the console cable is equipped with one 90° bent connector, this connector should be connected to the console, and not to the MAMMOMAT Novation *DR* stand.**

When the radiation shield and control console carrier is delivered with a MAMMOMAT Novation *DR*, the lower mounting holes have been sufficiently enlarged / milled in the factory, so that the connector of the cable, (being bigger than the one for MAMMOMAT 1000/ 3000/3000 Nova), should surely pass through. An example of installation using a cable with a straight connector can be seen on the picture below. The picture would change only insignificantly when the described bent connector is used.

Console cable with straight connector - example of an assembled setup

Mount the foot to the column

- Place the column upside down (opening facing upwards).
- Place the two long screws through the countersunk holes in the foot plate.
- Place the foot plate over the bottom opening of the column and insert the cylindrical tensioning block so that the grooves in the block fit into the brackets in the column.
- Mount the washers and the screws through the foot into the threaded holes in the cylindrical tensioning block and tighten them.

  If tightened too hard the column front cover will not fit.
  At this point the column front cover should be attached to check for proper fit, see Fig. 13.
- Turn the assembly unit around so that it stands on the foot.

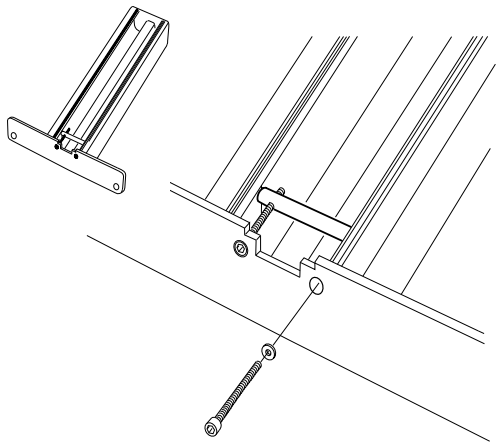


Fig. 1

Mount the bar support foot

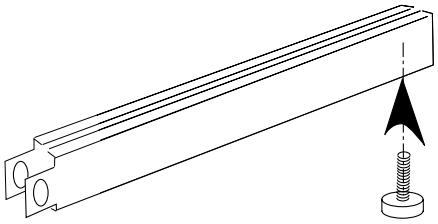


Fig. 2

Mount rubber-pads into the lower cross bar

- Either the lead glass radiation shield with lead equivalent 0.1 mm (064 31 774) or, the lead glass radiation shield with lead equivalent 0.3 mm (065 51 356) will be mounted into the rails as described below. Due to the fact that there are lead glasses of two different thicknesses available, one of which will be delivered, the pads are kept rather thick. The gap between, as shown on Figure 3, may be narrow. It may happen that it will be difficult to execute the working step Mounting the shield glass (on the Page 3 - 6). In order to facilitate the procedure of inserting the glass into the gap within the rubber pads it may be necessary to reduce the thickness of these pads, i.e. cut off some layer of them by means of a sharp knife, thus enlarging the gap.
- Push the rubber-pads, from the open end, into the bar. One pad as protection at the closed bar end and the other three pads regularly placed on the bar length.

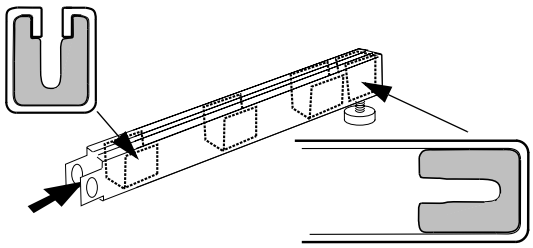


Fig. 3

NOTE	**Push the pad-edges carefully and strict into the bar foldings so they do not get compressed when the shield glass is mounted.**

Mount the lower cross bar

- Put the lugs of the lower cross bar through the holes into the column.
- *Inside the column;* place the cylindrical mounting block into the lug-holes.
- Mount the screw through the cylindrical mounting block into the hole in the column **but do not tighten yet**.

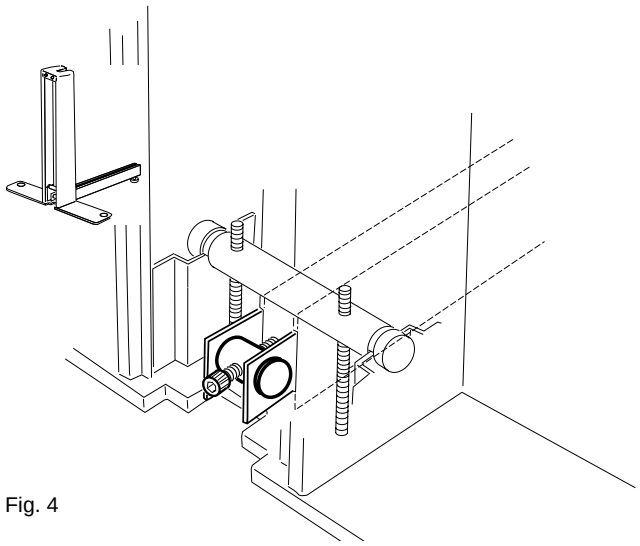


Fig. 4

Mount the cover plates for not used upper crossbar mounting-holes

Mount the three cover plates over those mounting-holes that not shall be used for upper bar mounting.

- Put the threads into the holes from outside the column.
- Mount the washers and the nuts on the threads from inside the column.

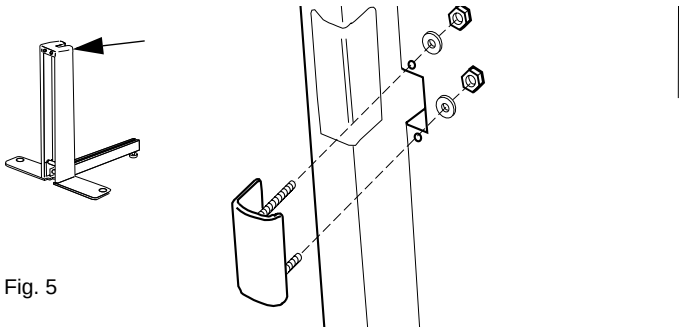


Fig. 5

If no separate control console shall be mounted: Cover holes on the crossbar

- Place the adhesive “cover” over the holed bar-surface.
- Mount three chink-pads at inner side of the upper cross bar, see Fig. 8. Then go to paragraph “Fit the stiffening cord to the glass”.

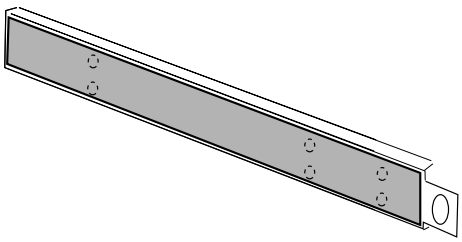


Fig. 6

Mounting the separate control console: Pull the cable through the bracket

NOTE	**The next working steps are valid for MAMMOMAT 1000/3000/3000 Nova only.** **For MAMMOMAT Novation *DR* please read once again carefully the paragraph "Console mounting height - important general remarks" on Page 2-2.**

NOTE	**11 m cable from the separate control console must be pulled through the bracket and later into the column.**

- Pull the cable from separate control console through the bracket.

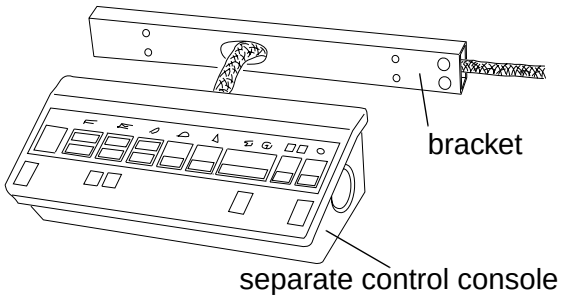


Fig. 7

Mount the control console to the bracket and the upper crossbar

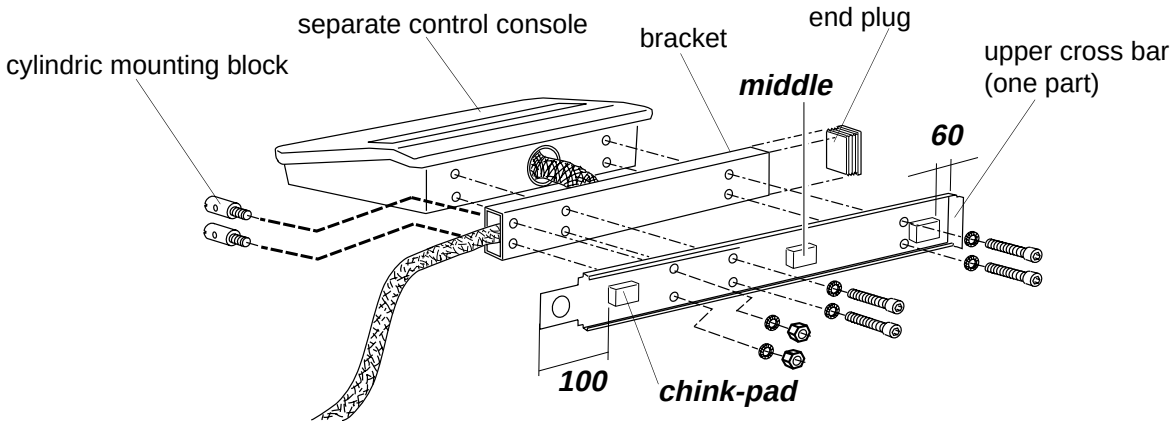


Fig. 8

- Mount the separate control console to the bracket and the upper crossbar, 4 screws and washers.
- Push the end plug to the bracket.
- Mount the two cylindric mounting blocks. *Be careful with the cable!* Fix them with washers and nuts. The threaded holes should be parallel to the bracket.
- Mount three chink-pads at inner side of the upper cross bar, see Fig. 8.

Pull the cable into the column

Put the premounted upper crossbar assembly on the floor and pull the cable through the hole at upper column. Leaving approx. 1.5 m of the cable, to be pulled through later.

Fit the stiffening cord to the glass

- Place the 8 tube-rubber parts into the cord profile. Two at each end and the rest regularly placed between.
- Wet the glass edge above the column top, to reduce the friction, and place the cord at the edge.

NOTE	**The stiffening cord cannot be moved when mounted!**

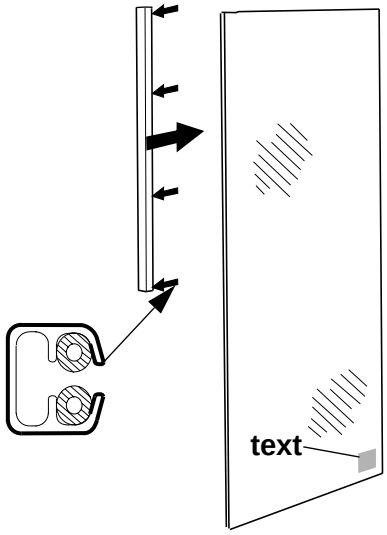


Fig. 9

Mount the shield glass

- Place the glass in the slot in the lower cross bar, see Fig. 10.

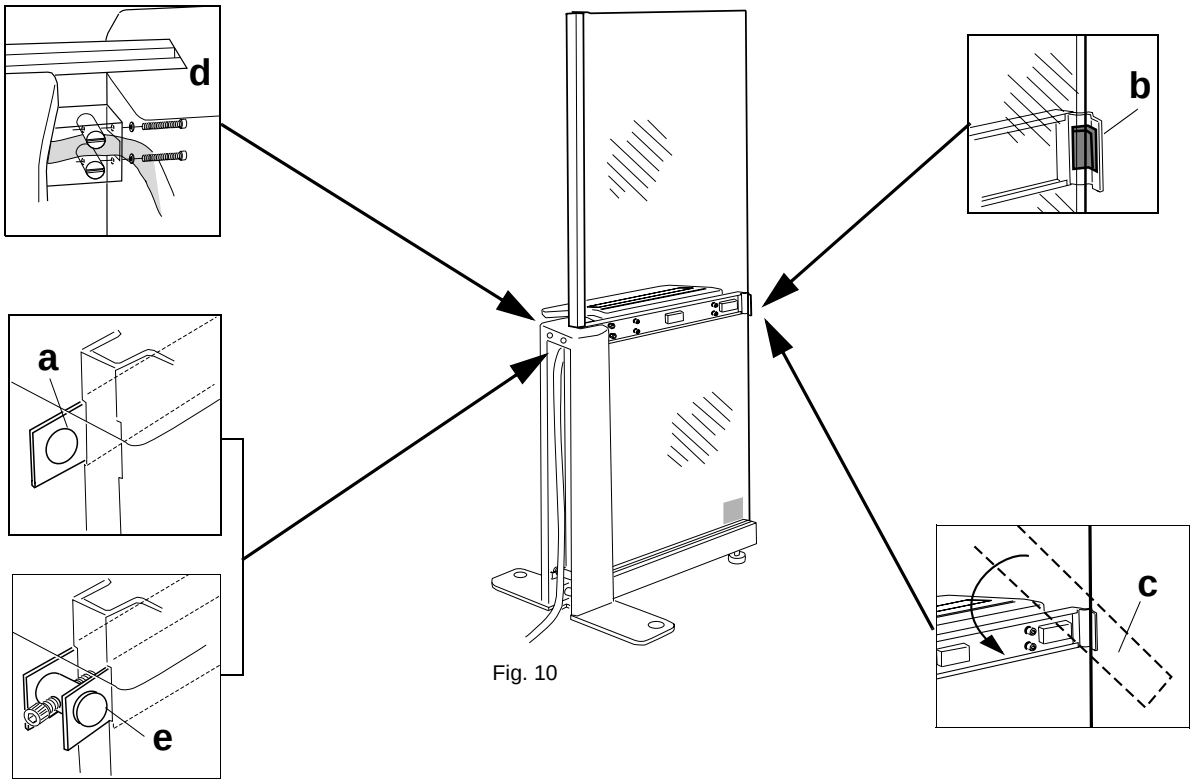


Fig. 10

Mount upper cross bar assembly

Refer to Fig. 10:

a Slide the lug of the upper cross bar half, with separate control console mounted (or adhesive “cover”) into the slot in the column.

b Fit the protective rubber around the edge of the shield glass at the outer cross bar edge.

c Mount the other half of the upper cross bar assembly by twisting it around the outer edge and then push the lug through the corresponding hole in the column.

d Fit the two screws with washers into the cylindrical mounting blocks of the separate control console bracket. The threaded holes are parallel to the bracket.

e Place the cylindrical mounting block into the lug holes. Mount the screw through the cylindrical mounting block into the hole in the column.

Tighten the bar and bracket fastenings

- Two screws as bracket fastening.
- One screw as upper cross bar fastening.
- One screw as lower cross bar fastening.

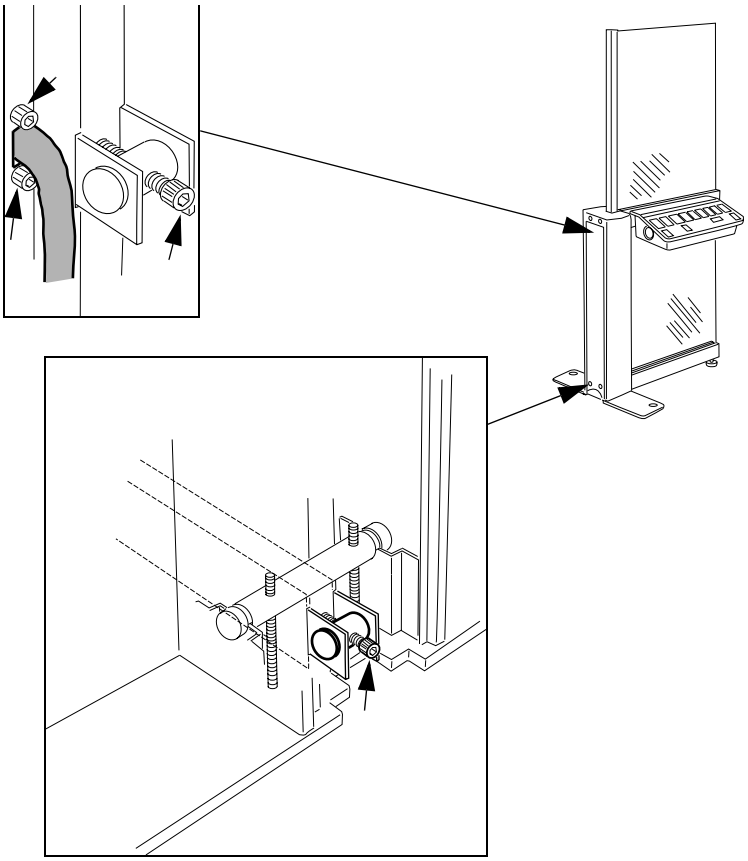


Fig. 11

Wind up and fasten not used cable length

- Wind up not used length of the cable and fix it to the upper cross bar attachments with a cable tie.

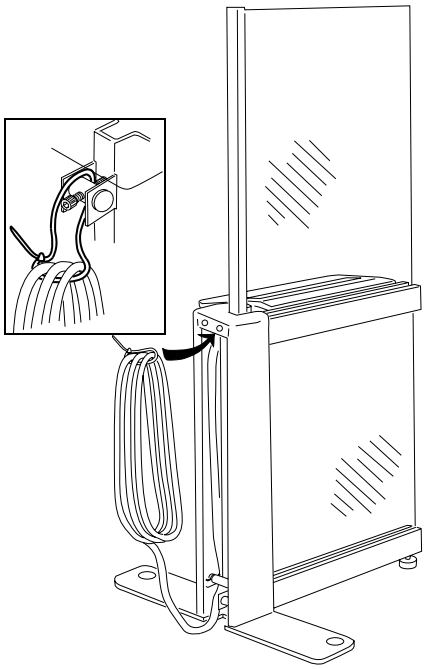


Fig. 12

Mount the column cover plate

- If installed without cable duct, mount the special plate over the cable duct opening with washers and screws.
- Slide the cover plate up/under the top edge of the column and fold it inwards.
- Push it downwards to right position.
- Check mounting hole positioning at top edge and fix the plate with washers and screws.

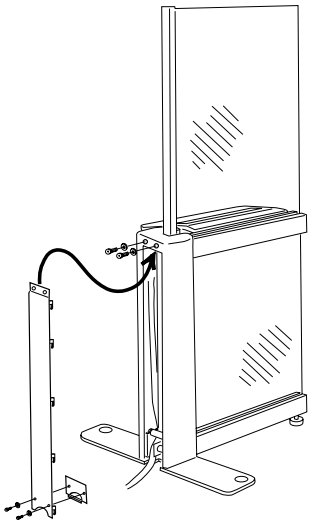


Fig. 13

Mount the hollow levelling screws (material number 063 86 200)

- Mount the hollow levelling screws into the fastening holes of the foot. Note that the square opening on the bottom of this screw has the dimensions: 12.7 x 12.7 mm. As such it can be driven by a ½ inch extension bit, if needed for levelling purposes.
- Only the screw head of dowels M8 and smaller would fit into the hollow part of the levelling screw and still have enough space to allow the use of a suitable tubular key or ring spanner. (Recommended dowel size M6).

Mount the shield to the floor

The radiation shield and control console carrier has to be bolted to the floor in any case. Corresponding instruction can be also seen in the corresponding Planning Guide.

⚠WARNING

The operating personnel may exert lateral force onto the console, people walking around may inadvertently push the assembly. There is a danger that the radiation shield and console carrier would topple over if not bolted to the floor correctly.

Execute fixation to the floor in a thorough and professional manner.

When bolting the shield to the floor, the fixing screws shall be pass through the hollow levelling screws:

- Position the shield and mark out appropriate fixing holes on the floor.
- Drill the holes and insert dowels and screws (Liebig safety dowel M6 S10/35)
- Tighten the screws to 10 Nm.
- Place the covers over the hollowed levelling screws.

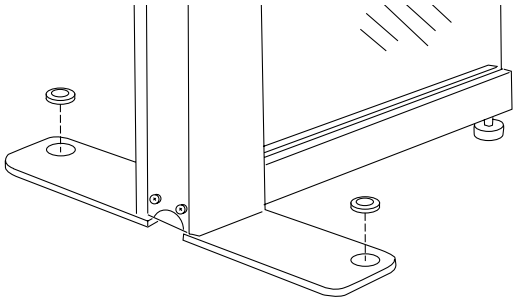


Fig. 14

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Waste disposal

Public legal directives can contain special regulations regarding disposal of this product. To avoid environmental pollution and human injury, we therefore request that you contact us if you wish to cease operation of this product with the intention of disposing it.

Radiation protection material

- Lead in the shield glass, approximately 12 kg.

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Chapter	Page	Changes
All	All	Layout of the whole document changed
0	All	Chapter completely revised
1	1, 2	Hints facilitating the installation on both
2	2	MAMMOMAT 1000/3000/3000 Nova, as well as
3	2	MAMMOMAT Novation *DR* were inserted

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